## NAME

Module 16Solving Rational EquationsLesson 2Solving Problems Using Direct<br/>Variation

## **Lesson Objectives**

- Determine whether a function is a direct variation and identify the constant of variation.
- Solve problems using direct variation.

A direct variation involving *x* and *y* is a function in which the ratio  $\frac{y}{x}$  is a

nonzero constant

For a direct variation involving x and y, y **varies directly** as x.

In the direct variation  $\frac{y}{x} = k$ , k is the **constant of variation** 

**1** Does *y* vary directly as *x*?

X	у	
8	6	
12	9	
15	10	

## No, y does not vary directly as x.



Is this function a direct variation?

х	у	
3	15	
5	25	
-2	-10	

Х

3

5

-2

49

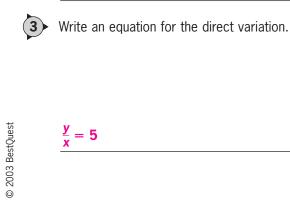
у

15

25

-10

## Yes, this function is a direct variation.



Module 16 Lesson 2

monotype composition

- The distance between cities on a map varies directly with the actual distance between the cities. The distance between two cities on a particular map is five inches. The actual distance between the cities is 65 miles. What is the actual distance between two cities that are three inches apart on the map?
  - 39 miles

5 The time it takes you to hear thunder varies directly with your distance from the lightning. If you are two miles from a lightning strike, you will hear the thunder clap about ten seconds after you see the lightning. How far are you from a lightning strike if you hear the thunder clap four seconds after you see the lightning?
0.8 mile

© 2003 BestQuest

Module 16 Lesson 2

Guided Notes

monotype composition